

# **Department of Energy**

**Environmental Management Consolidated Business Center** 250 East 5th Street, Suite 500 Cincinnati, Ohio 45202 (513) 246-0500

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EMCBC-00291-07

Mr. James A. Saric, Remedial Project Manager United States Environmental Protection Agency Region V-SRF-5J 77 West Jackson Boulevard Chicago, Illinois 60604-3590

Mr. Thomas Schneider, Project Manager Ohio Environmental Protection Agency Southwest District Office 401 East Fifth Street Dayton, Ohio 45402-2911

Dear Mr. Saric and Mr. Schneider:

## TRANSMITTAL OF RESPONSES TO THE ADDITIONAL OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON REVISION 0 AND THE FINAL CERTIFICATION REPORT FOR AREA 6 WASTE PITS 1, 2, AND 3, THE BURN PIT. THE CLEARWELL, AND THE AREAS WEST AND NORTH OF THE WASTE PITS. **REVISION 1**

References:

- 1) Letter DOE-0174-06, J. Reising to J. Saric/T. Schneider, "Transmittal of the Draft Certification Report for Area 6 Waste Pits 1, 2, and 3, The Burn pit, the Clearwell, and Areas West and North of the Waste Pits," dated July 26, 2006
- 2) Letter, T. Schneider to J. Reising, "Comments Draft Certification Report for A6 WP's 1, 2, and 3, the Burn Pit, the Clearwell, and the Areas West and North of the WP's," dated August 18, 2006
- 3) Letter, J. Saric to J. Reising, "Area 6 Waste Pits Certification Report," dated August 30, 2006
- 4) Letter DOE-0081-07, J. Reising to J. Saric/T. Schneider, "Transmittal of the Final Certification Report for Area 6 Waste Pits 1, 2, and 3, The Burn Pit, the Clearwell, and the areas West and North of the Waste Pits," dated December 4,2006
- 5) Letter, T. Schneider to J. Reising, "Disapproval Response to Comments to OEPA Comments on the Draft Certification Report for Area 6 Waste Pits 1, 2, and 3, the Burn Pit, the Clearwell, and the Areas West and North of the Waste Pits," dated January 22, 2007

Mr. T. Schneider

Enclosed for your approval are the additional responses to Ohio Environmental Protection Agency (OEPA) comments on Revision 0 and the final Certification Report for Area 6 Waste Pits 1, 2, and 3, the Burn Pit, the Clearwell, and the Areas West and North of the Waste Pits, Revision 1. All comment responses have been incorporated into Revision 1 of the final report.

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If you have any questions or require additional information, please contact me at (513) 648-3139.

Sincerely,

Johnny Reising
Johnny Reising

Director

Fernald Closure Project

Enclosures: As stated

cc w/enclosures:

T. Schneider, OEPA-Dayton (three copies of enclosures)

M. Cullerton, Tetra Tech

M. Shupe, HSI GeoTrans

S. Helmer, ODH

AR Coordinator, Fluor Fernald, Inc./MS12

cc w/o enclosures:

F. Johnston, Stoller, Inc./MS12

F. Miller, Fluor Fernald, Inc./MS90

P. Mohr, Fluor Fernald, Inc./MS1

T. Terry, Fluor Fernald, Inc./MS1

# ADDITIONAL RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT CERTIFICATION REPORT FOR AREA 6 WASTE PITS 1, 2, AND 3, THE BURN PIT, THE CLEARWELL, AND THE AREAS WEST AND NORTH OF THE WASTE PITS

# FERNALD CLOSURE PROJECT FERNALD, OHIO

**FEBRUARY 2007** 

U.S. DEPARTMENT OF ENERGY

addition, if a Senior Adult makes contact with the water the risk affect would be almost nonexistent considering age. If this assumption stands, then ICs must be developed to support it.

- Response: A) EPA (1989b) notes that national trends show most individuals do not live in a region of the country for more than 30 years. This reflects the EPA guidance to use the reasonable maximum exposure when performing risk calculations. Therefore, 30 years is used as the sum across the age groups for the undeveloped park user, with the years partitioned into 3 years for child, 6 for youth, 14 for adult and 7 for senior adult. However, DOE concurs that some residents in the Fernald area will spend their entire life in one residence. As the risk increases linearly with the increase in exposure duration, one need only multiply the 30-year exposure duration risk for the undeveloped park user (see below response to Part B) by 2.33 (70/30) to obtain the risk for a resident living in the area for 70 years.
  - B) The exposure pathway for surface water was added to the senior adult receptor. The risk was re-evaluated for this added exposure, and the total ILCR for the 30-year exposure duration across all age groups is 1.07E-05. A 70-year duration would result in a risk of 2.49E-05 (i.e., 2.33\*1.07E-05), as noted in the response to Part A.

Action:

Appendix C will be updated with the new risk calculation that includes the surface-water pathways for the senior adult and the paragraph discussing exposure duration (page 5-8) will be revised to read:

"The exposure duration is the number of years over which an individual will visit the park. EPA (1989b) notes that national trends show individuals do not live in a region of the country for more than 30 years. Therefore, 30 years is used as the sum across the age groups, with the years partitioned into 3 years for child, 6 for youth, 14 for adult and 7 for senior adult. However, some residents in the Fernald area will spend their entire life in one residence. As the risk increases linearly with the increase in exposure duration, one need only multiply the 30-year exposure duration ILCR for the undeveloped park user (1.07E-05, Appendix C) by 2.33 (70/30) to obtain the total ILCR for a resident living in the area for 70 years (2.49E-05)."

3. Commenting Organization: Ohio EPA Commenter: OFFO

Section #: 2.2.1

Pg #: 2-3 Line #: second paragraph Code: E

Original Comment #: 3

Comment: The text does not mention that the variances can be found in Appendix B.1. Please include

this information.

Response: Agree.

Action: The text will be revised to reference Appendix B.1.

Commenter: OFFO 4. Commenting Organization: Ohio EPA

Section #: Figure 2.7 Line #: Code: C Pg #:

Original Comment #: 4

Comment: 2-7 needs revised to show CU 27.

Response: Agree.

Action: Figure 2-7 will be changed to identify CU 27.

# ADDITIONAL RESPONSES TO OHIO ENVIRONMENTAL PROTECTION AGENCY COMMENTS ON THE DRAFT CERTIFICATION REPORT FOR AREA 6 WASTE PITS 1, 2, AND 3, THE BURN PIT, THE CLEARWELL, AND THE AREAS WEST AND NORTH OF THE WASTE PITS (20600-RP-0008, Revision A)

### **COMMENTS**

1. Commenting Organization: Ohio EPA Commenter: OFFO

Section #: General Pg #: Line #: Code: C

Original Comment #: 1

Comment: Recent surface water sampling results from the area west of pit 3 exceed the surface water uranium FRL. It is as yet unclear the cause of these high uranium values. Until such time as a sufficient technical data are available to explain the mechanism for this high contamination, Ohio EPA will assume the possibility that soils exceeding the FRL may remain in the area as

well and will thus withhold approval of the certification report.

Response: Due to the presence of this elevated uranium in the surface water, an investigation has been initiated as to the source of the uranium. A leachability study is in process that takes into account four locations of the expected worst-case surface soil from the area. Total uranium of the soil matrix as well as the uranium that has leached into the aqueous phase will be tested and compared to produce a leachability constant similar to what was done in the OU5 Feasibility Study. Recent preliminary results of the total uranium in the soil from these four worst-case locations demonstrate values of uranium consistently at 48.0 ug/g and 45.0 ug/g for the first location and its duplicate respectively, 24.0 ug/g, 47.6 ug/g, and 42.5 ug/g for the last three locations. This indicates that the residual uranium soil concentration is consistent with the results from the certification effort in this area.

The leachability batch tests are currently underway with results due back towards the end of February. Based on the information obtained from this study, there will be a better understanding of the source of this elevated uranium in the surface waters in the area west of former waste pit 3. An acceptable path forward will then be developed with USEPA and OEPA.

Action: Submit the results of the leachability study.

2. Commenting Organization: Ohio EPA Commenter: OFFO

Section #: General Pg #: Line #: Code: E

Original Comment #: 2

Comment: Due to recent changes in the Residual Risk for the Waste Pits, Ohio EPA disapproves of this certification report and is awaiting DOE's clarification in regards to these changes. Our issues are as follows.

- A) The Exposure Duration was changed from CRARE, 70 to 30 years. The drop in years is inconsistent with the actual number of years that the population lives in the Fernald area, and it is inconsistent with the CRARE. One example is the Butterfield family who has been in the area since the 1800's. In addition when the number of years is shortened, each age range is cut in half. This suggests a constant moving of residents in and out of the area, which is not typical of the Fernald population.
- B) Exposure Duration for Surface Water. DOE is making the assumption that the Senior Adult will not enter the water. This is highly unlikely considering "Senior Adults" will be the most probable age range of people conducting and assisting with wetland education. In